L6: Entry 2 of 14 File: USPT Aug 7, 2001

DOCUMENT-IDENTIFIER: US 6270790 B1
TITLE: Soft, convex shaped chewable tablets having reduced friability

Detailed Description Text (6):
The tablets of the present invention are used to orally administer a wide variety of active ingredients. Suitable active ingredients include pharmaceuticals, minerals, vitamins and other nutraceuticals. Suitable pharmacuticals include analgesics, decongestants, expectorants, antitussives, antihistamines, gastrointestinal agents, diuretics, bronchodilators, sleep-inducing agents and mixtures thereof. Preferred pharmaceuticals include acetaminophen, ibuprofen, flurbiprofen, naproxen, aspirin, pseudoephedrine, phenylpropanolamine, chlorpheniramine maleate, dextromethorphan, diphenhydramine, famotidine, loperamide, ranitidine, cimetidine, astemizole, terfenadine, terfenadine carboxylate, cetirizine, mixtures thereof and pharmaceutically acceptable salts thereof.

Detailed Description Text (17):
The coated particle, in a dried state, generally contains about 5 to about 60, preferably about 10 to 40, weight percent of the blend of the first and second polymers. The exact proportions of the coating to the active ingredient can, however, vary depending upon the level of taste masking required and whether a sustained or immediate release of the active is desired. Larger proportions of the coating tend to provide a sustained release effect and enhance taste masking.

Other Reference Publication (2):
Danckwerts et al., The Effect of Processing Variables in the Compression Properties of Controlled Release Core-In-Cup Compressed Tablets from a New Adjustable Punch, International Journal of Pharmaceutics, 123 pp. 85-94, 1995.*

CLAIMS:

8. The tablet of claim 1 wherein the active ingredient is selected from the group consisting of acetaminophen, ibuprofen, flurbiprofen, naproxen, aspirin, pseudoephedrine, phenylpropanolamine, chlorpheniramine maleate, dextromethorphan, diphenhydramine, famotidine, loperamide, ranitidine, cimetidine, astemizole, terfenadine, terfenadine carboxylate, cetirizine, mixtures thereof and pharmaceutically acceptable salts thereof.

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TITLE: Soft, convex shaped chewable tablets having reduced friability

DATE-ISSUED: August 7, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Robinson; Ronni L.	Ambler	PA		
Damon; James R.	Chalfont	PA		
Mossop; James R.	Quakertown	PA		
Palmer; Michael D.	Philadelphia	PA		

US-CL-CURRENT: 424/441; 424/439, 424/489, 424/490, 424/493, 424/494, 424/497

CLAIMS:

What is claimed is:

1. A compressed, chewable tablet having opposed major surfaces, comprising:

about 0.1 to about 60% of at least one active ingredient coated with a taste masking coating;

about 30 to about 90% of a water-disintegratable, compressible carbohydrate selected form the group consisting of mannitol, sorbitol, maltitol, dextrose, sucrose, xylitol, lactose, and mixtures thereof;

about 1 to about 30% of a binder selected form the group consisting of cellulose, cellulosic derivatives, polyvinyl pyrrolidone, starch, modified starch and mixtures thereof;

about 0.1 to about 5% of a lubricant;

0 to about 5% sweetener;

0 to about 5% flavor;

0 to about 5% color, by weight of said tablet; and

said face surfaces having a convex shape and said tablet having a hardness of about 2 to about 11 kp/cm.sup.2 and a friability of less than about 1%.

2. The tablet of claim 1 having a hardness of about 5 to about 8.5 kp/cm.sup.2.

3. The tablet of claim 1 having a friability of less than about 0.5%.

4. The tablet of claim 1 wherein said face surfaces have a bi-convex or tri-convex shape.

5. The tablet of claim 4 having bi-convex shaped face surfaces and a minor axis cup radius of about 10 to about 40 percent of the tablet diameter and major axis cup radius of about 100 to about 400 percent of the tablet diameter.

6. The tablet of claim 1 wherein said coated active ingredient comprises at least one active ingredient coated with a blend of a first polymer selected from the group consisting of a cellulose acetate and cellulose acetate butyrate and a second polymer selected from the group consisting of polyvinyl pyrrolidone and hydroxypropyl cellulose, wherein the weight ratio of the first polymer to the second polymer is within the range of about 90:10 to about 50:50.

7. The tablet of claim 6 wherein the coated active ingredient comprises about 5 to about 60 percent by weight of the blend of first and second polymers.

8. The tablet of claim 1 wherein the active ingredient is selected from the group consisting of acetaminophen, ibuprofen, flurbiprofen, naproxen, aspirin, pseudoephedrine, phenylpropanolamine, chlorpheniramine maleate, dextromethorphan, diphenhydramine, famotidine, loperamide, ranitidine, cimetidine, astemizole, terfenadine, terfenadine carboxylate, cetirizine, mixtures thereof and pharmaceutically acceptable salts thereof.

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Palmer; Michael D.	Philadelphia	PA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
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APPL-NO: 09/ 135723 [PALM]
DATE FILED: August 18, 1998

INT-CL: [07] A61 K 9/28, A61 K 47/00

US-CL-ISSUED: 424/441; 424/439, 424/489, 424/490, 424/493, 424/494, 424/497
US-CL-CURRENT: 424/441; 424/439, 424/489, 424/490, 424/493, 424/494, 424/497

FIELD-OF-SEARCH: 424/464, 424/465, 424/494, 424/482, 424/470, 424/439, 424/441, 424/489, 424/490, 424/493, 424/497

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	3619292	November 1971	Brouillard et al.	
☐	4760094	July 1988	Blank et al.	
☐	4851226	July 1989	Julian et al.	
☐	5075114	December 1991	Roche	424/470
☐	5275823	January 1994	France et al.	
☐	5460825	October 1995	Roche et al.	
☐	5464632	November 1995	Cousin et al.	424/425
☐	5489436	February 1996	Hoy et al.	424/441
☐	5609883	March 1997	Valentine et al.	424/464
☐	5686107	November 1997	Ratnaraj et al.	
☐	5876759	March 1999	Gowan, Jr.	424/494

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FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
98/46215	October 1998	WO	

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Muresan et al., Stability Study if Pyroxicam in the Presence of Auxiliary Substances of Compression, Farmacia 41, No. 1-2, pp. 51-56, 1993.*
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Kigasawa et al. Yakugaku Zasshi, vol. 95, No. 7, p. 769-773 (1975).

ART-UNIT: 165

PRIMARY-EXAMINER: Page; Thurman K.

ASSISTANT-EXAMINER: Seidleck; Brian K.

ABSTRACT:

The present invention relates to a compressed, chewable tablet containing at least one active ingredient, a water-disintegratable, compressible carbohydrate and a binder. These components are dry blended and compressed into convex-shaped tablet having a hardness of about 2 to about 11 kp/cm.sup.2 and friability less than 1%.

8 Claims, 3 Drawing figures

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CONTROLLED.DWPI,TDBD,EPAB,JPAB,USPT.	1875210
COMPRESSION.DWPI,TDBD,EPAB,JPAB,USPT.	540029
COATING.DWPI,TDBD,EPAB,JPAB,USPT.	1081085
LAYERED.DWPI,TDBD,EPAB,JPAB,USPT.	119477
TABLET.DWPI,TDBD,EPAB,JPAB,USPT.	75893
BILAYERED.DWPI,TDBD,EPAB,JPAB,USPT.	738
INNER.DWPI,TDBD,EPAB,JPAB,USPT.	1798670
(L3 AND (CETIRIZINE.CLM. OR PSEUDOEPHEDRINE.CLM. OR IMMEDIATE RELEASE OR CONTROLLED RELEASE OR COMPRESSION COATING OR LAYERED TABLET OR BILAYERED TABLET OR INNER CORE OR OUTER LAYER)).USPT,JPAB,EPAB,DWPI,TDBD.	59

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L3	l1 and l2	72	L3
L2	pseudoephedrine	1053	L2
L1	cetirizine	257	L1

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(L5 AND PSEUDOEPHEDRINE.CLM.).USPT,JPAB,EPAB,DWPI,TDBD.	14

Database: US Patents Full-Text Database; US Pre-Grant Publication Full-Text Database; JPO Abstracts Database; EPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

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L6	l5 and pseudoephedrine.clm.	14	L6
L5	l4 and cetirizine.clm.	20	L5
L4	l3 and (cetirizine.clm. or pseudoephedrine.clm. or immediate release or controlled release or compression coating or layered tablet or bilayered tablet or inner core or outer layer)	59	L4
L3	l1 and l2	72	L3
L2	pseudoephedrine	1053	L2
L1	cetirizine	257	L1

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